



Top ten features of Windows Vista

After four years in development, the next version of Windows has finally begun to emerge. David Fearon looks at the beta version and highlights the most significant features in Microsoft's latest operating system

Microsoft's Windows Vista – formerly in development under the code name Longhorn – is the operating system that will take over from Windows XP towards the end of next year, if all goes to plan. A beta version of Vista is now available, so we're bringing you an overview of the most interesting features as they stand.

The main thrust of Vista lies in tackling the problem of organising huge amounts of data as our hard disks become the receptacle for more and more information. Under the bonnet, the focus is on metadata – data that describes the type of content in a file. XML and web-based interfaces have become the standard means of recording and transferring such information, giving huge potential for 'intelligent data' applications.

Developing a new operating system is a huge challenge and Vista is already looking a little war-torn; several features originally planned have been dropped, having slipped too far behind schedule to be salvaged. The main surprise has been the elimination of the WinFS filing system, which was

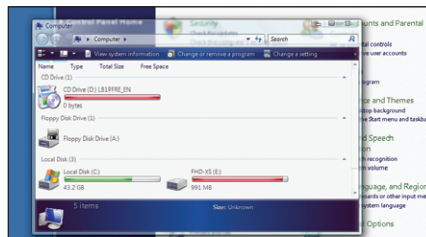
due to replace the current NTFS. WinFS is a system more akin to a relational database than a traditional filing system. As such it would have been a natural choice for an operating system that puts so much emphasis on data organisation and retrieval. WinFS has now been sectioned off into a separate project and is due to be released a little after Vista. WinFS Beta 1 had just been released as we went to press.

There's still more work to do on Vista: expect the user interface to change between now and the final release. Microsoft's official line is that this beta release is more for developers to get their hands on the underlying architecture than for users to see its finished appearance.

2 GLASS INTERFACE

You can talk about security or the way things work behind the scenes, but the main thing everyone wants from a new operating system is as many new things to gawp at as possible. The prettiness factor in Vista comes from the Avalon graphics subsystem, now renamed the Windows Presentation Foundation. This creates the default Aero look with a hardware-accelerated layer known as Glass, which gives the interface semi-transparent windows. These look very pretty indeed, as do the drop shadows around window borders.

Desktop icons and window furniture are more sophisticated, too, and in 24-bit colour. In general, it all looks classier than the stock Windows XP Lego Duplo look. Unfortunately, the first beta release of Vista disappoints slightly compared to the pre-beta releases that we saw. In these, there was a new desktop sidebar housing a lovely-looking analogue clock. This has gone from the beta release and the indications are it probably won't be coming back.

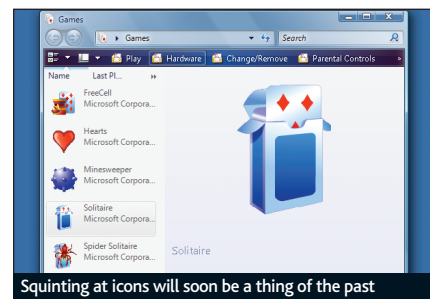


Vista will look at its best on modern graphics hardware, allowing sophisticated window-translucency effects

3 SCALABLE ICONS

Vista's interface is destined to include vector-based desktop furniture. This means that, rather than bitmap-based icons that are designed to look good only at one size – getting blocky if you scale them up and descending into incomprehensible jumbles of pixels if you scale them down – vector-

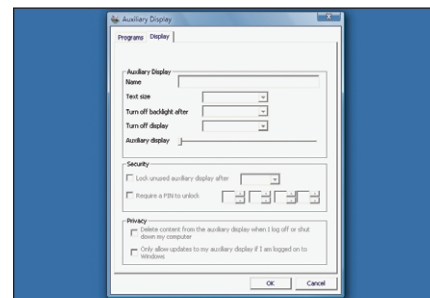
based icons can be scaled up and down and will still look smooth and sharp. This solves the problem of super-high-resolution screens displaying icons at ridiculously small sizes. In beta 1 this feature only makes itself felt in Explorer windows, with folders icons and a few of the standard Windows application icons completely scalable.



Squinting at icons will soon be a thing of the past

4 AUXILIARY DISPLAY

You may have heard about Intel's mock-ups of future notebooks, which include a small LCD on the outside of the lid. The point of these is to provide an instant, PDA-like interface showing alerts, the calendar and so on without the need to open and boot the notebook. Vista has native support for these displays in its tantalisingly inert Auxiliary Display dialog box. It doesn't do anything yet, because no commercial systems exist with an auxiliary display at the moment, but this is perhaps evidence that they will be here within 18 months.



This inert dialog box will support notebooks with displays built into the outside of their lids – when such a notebook is available

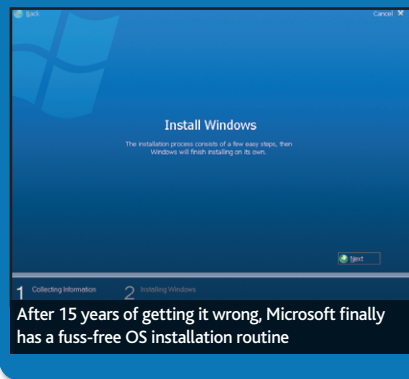
5 BACKUP

The Security Center in Windows XP comprises a firewall, automatic updates and anti-virus alerts. What you won't see is any mention of the most important form of security for many people: backup. The current XP Backup application is limited in the types of media it can write to and needs quite a lot of effort to manage. This is solved in Vista with the introduction of



1 INSTALLATION

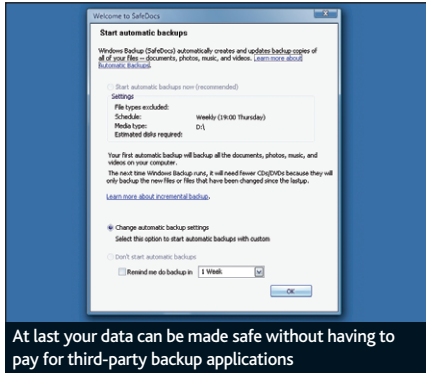
The beta release of Vista doesn't allow you to upgrade an existing installation of Windows XP, but we fully expect that the final release version will. In place already is a properly automatic installation routine. If you've ever installed a clean copy of XP you'll know you can't go away and leave it or you'll come back to find it waiting for you to configure your network setup or select your keyboard language. Now you just fire up the install routine, give it a serial number and hit Install. The routine then churns away for about 45 minutes, automatically restarts a few times and ends up at the new desktop without any more intervention.



After 15 years of getting it wrong, Microsoft finally has a fuss-free OS installation routine



SafeDocs, a fully automatic, sensibly designed backup system that works in the background and does things the right way round: it alerts you if there's a problem with backups, rather than you having to trawl through the backup log to make sure your data is safe, as is the case with the current system. It can also write to optical media, reducing the cost of backing up.

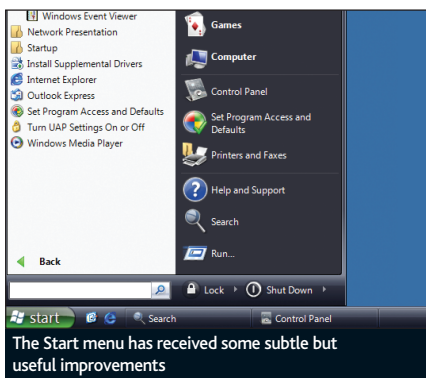


6 START MENU

The basic way the Start menu works is still the same: click the button and find your programs in a submenu. But details have changed and there are some interesting differences.

If you need to navigate a few submenus to get to your programs, then instead of progressively opening up to the right, getting in the way of everything and eventually covering the whole screen, each submenu replaces the last, still within the confines of the Start menu. A new Back button at the bottom lets you return to where you were. It's a much neater way of doing things.

At the bottom of the Start menu is a search box so if you can't be bothered to hunt for the program you want, just start typing its name here and any matching programs are shown as you type for you to select immediately.



7 UNIVERSAL ACCESS PROTECTION

One of the perennial problems with Windows is that of user privileges. Unlike Linux or Mac OS, most people simply log on to and use their system as an Administrator rather than, for instance, a Power User. This means any rogue application that gets on the system can also run with those same privileges, allowing it to wreak havoc on your PC.

The universal access protection (UAP) system is a means of combating this. It allows the user to log on as Administrator, but any application that wants to do things requiring administrator rights can do so only once the user has entered a



SEARCH AND VIRTUAL FOLDERS

Microsoft is now taking a new approach to data. Rather than your having to keep track of where you put all your gigabytes of music, photos and other data, the operating system keeps track of it and organises it for you. This is a three-pronged approach catered for first by the new Windows Search Engine, based on Windows 2000 and XP's underused Indexing Service. This continually trawls your drives in the background and has its own System Tray icon. Second is the heavy emphasis on metadata, or data about data. Open the Pictures folder, click on an image and you'll see a preview thumbnail and data such as title, author, star rating and so on. You can edit this metadata directly by clicking on a heading.

Third and most important is the introduction of virtual folders and the new search facility. Virtual folders are the key new user-interface component in Vista, distinguished from regular hard-disk folders by their blue colour. Standard folders are predefined, but you can create your own folders by saving searches from the multi-level and powerful Search dialog box. This lets you find files by type, metadata, star rating, a specific date range and much more. You can also specify

AND, OR and NOT searches, so you can match all pictures containing the keyword 'holiday' but not those containing 'rain', for instance. You can add as many levels as you like to searches, allowing multiple refinements of the search.

Once the search has been constructed, you can save it as a virtual folder. This behaves just like a normal folder, but the files it shows aren't in a particular place on the hard disk; they could be anywhere as long as they match your search criteria. Virtual folders are continually updated, so if a new file appears that matches the search, it will appear in the virtual folder as soon as the Windows Search Engine has indexed it.

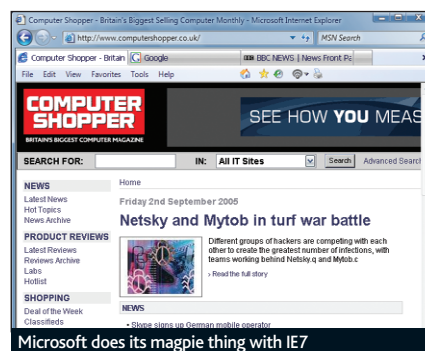


password. The concept is similar to a firewall alert but for access to the local PC. Just like a firewall, the user is alerted to activity and must explicitly allow it. This means rogue applications can't sneak in and start doing things unnoticed, and unauthorised human users are more restricted, too.



9 INTERNET EXPLORER 7

It's not only confined to Vista, but the beta version of Internet Explorer 7 ships as standard with the new operating system. It shamelessly rips off the best feature of its rival Firefox – tabbed browsing – allowing you to open several browser



views in one window, clicking the browser tabs at the top to move between them. RSS feed-discovery is integrated too, allowing you to subscribe to feeds and bookmark them. The new interface is much cleaner and simpler than before, devoting as much space as possible to the actual pages you're viewing.

Slated for inclusion in the next revision is an anti-phishing tool, which will check for phishing sites by referring to a list updated constantly by Microsoft, and a new Protected Mode, which completely locks down the browser and isolates it from the rest of Windows for maximum security.

See *Advanced Windows*, Shopper November 2005, for an in-depth look at Internet Explorer 7.

10 NO MORE MY COMPUTER

If you remember the days of the introduction of Windows 95, you may also remember the widespread disdain at the ridiculously fluffy 'My' convention, which included My Computer, My Documents, My Pictures, My Everything. All sorts of hacks and tweaks ensued to get rid of it, although eventually everyone just got used to the damn thing. Thankfully, it's no longer around. We're back to straightforward, descriptive names such as Computer, Documents and Pictures folders. Thank goodness. ☺

